

ABSTRACT OF THE DISCLOSURE

[0064] A catalyst for the selective hydrogenation of acetylene comprising a support having a uniformly round external surface; palladium in the range of about 0.01 to 1.0 weight percent of the catalyst and substantially all of the palladium being concentrated in a skin periphery of the catalyst; and silver in the range of about 0.5 to 10.0 times the weight of the palladium. Preferably, the support is selected from the group consisting of alumina, titania, zirconia, zinc aluminate, zinc titanate and mixtures thereof, and/or the skin has a thickness less than about 400 microns.